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THE DEVELOPMENT AND EDUCATIONAL SIGNIFICANCE OF THE INTERCOLLEGIATE BROADCASTING SYSTEM

A Thesis Presented for the
Degree of Master of Arts

By

John Patrick Neville, B.A.

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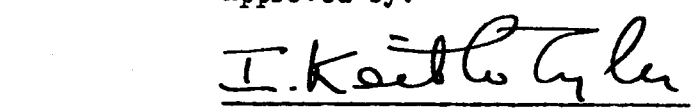
Approved by:



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CHAPTER I

BEGINNINGS OF INTRA-COLLEGE BROADCASTING

The Freshman class of Brown University, Providence, Rhode Island, in 1936 brought together George Abraham of New York City and David Borst of New Haven, Connecticut. The boys were living in different dormitories and wanted to communicate with each other easily, quickly and for indefinite periods. Borst, enrolled in engineering, and Abraham, in physics, began to explore the possibility of using their radios as an intercommunicating system. Having decided that the idea was practicable, each boy purchased a microphone and connected it to his radio. A line was run between the dormitories terminating at each end in radio sets. The loud-speakers of these sets were used as receivers. This system of inter-dormitory communication worked so well that other students wanted to be included in the arrangement. Abraham and Borst agreed to include them at a cost of $1.00 per member. The new members were not given microphones. Instead they used the loudspeakers of their radios both as microphone and receiver. Thus any member of the "network" could communicate with all the other members by shouting into his radio loud-speaker and, in turn, listening to the shouts of other members in different rooms and different dormitories.[1]

This system soon became a problem. The wires were carrying much shouting and little listening. Gradually the plan changed to a series of "broadcasts" put on from Abraham's room. The pattern of a broadcasting station began to emerge. The rooms wired to the system became listening posts for campus news, impromptu shows, and phonograph records. As the

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[1]Erik Barnouw, "Radiator-Pipe Broadcasters," Saturday Evening Post, CCXIII (May 24, 1941) p.79

system grew, more and more wires appeared from building-top to building-top. More drops ran down the roofs and the sides of the buildings until finally the administration became concerned, thinking that the wiring constituted a fire hazard. On order of the administration, the radio station, which Abraham and Borst had named The Brown Network, ceased operations.[2]

After some careful planning, the boys proposed to the administration that they run their wires through the steam tunnels and thereby eliminate the fire hazard. This plan met with approval and soon the station was ready to start operations again. But this time they set up the "Broadcasting station" in Faunce House, the activities building, in which the University made available to them sufficient space for a control room and a small studio.

Lines now connected twenty university buildings. The wires necessary to connect all the sets caused a good deal of work for the engineering staff. The programming made necessary a production staff. The necessity for coordination called for a general manager. So the station staff was organized on the lines of a regular broadcasting station.[3] The organization included a general manager, technical director, program director, chief announcer, business manager and public relations director.

For every dormitory a section manager was appointed whose duty it was to keep the wires in repair in the dormitory, to inspect the sets of the subscribers each week, and to report to the technical director.

The equipment of the Brown Network was working reasonably well, but the section managers were having a difficult time keeping the lines in

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[2] Ibid., p.80

[3] Ibid., p.81

repair. The fine wire used was easily broken by maids and janitors with cleaning equipment.[4] The university, too, began to object to so much wiring. The boys began to think in terms of wired radio frequency transmission. Under such a plan they could do away with the wiring to the individual set and so eliminate much if not all of the inside wiring, save the technical department a good deal of trouble, and satisfy the university by eliminating the objectionable wiring.

Up to now the system had been operating on audio frequency, but this new plan got into the realm of radio frequency. And radio stations must be licensed by the Federal Communications Commission before they are free to operate. The boys at Brown consulted the rulings of the Federal Communications Commission to determine the legality of their new plan. They found that program transmission of this nature (wired wireless) must be carried out in accordance with certain rules and regulations of the Federal Communications Commission. The Commission's rules permits the use of this kind of equipment providing that it does not interfere with the operation of licensed stations or other equipment outside the building in which the wired wireless is used.[5]

Having determined the legality of their plan, the originators of the Brown Network set about to transform their system from audio transmission to radio transmission. They chose the frequency of 570 kilocycles which is not occupied by any other station near Providence. They decided to use the steam pipes and metal frameworks of the buildings as their antenna, and placed a small transmitter in each of the buildings to which they were

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[4] Ibid., p.80

[5] David W. Borst, "Fundamental Considerations in the Design of Wired Wireless Transmission Systems."

broadcasting. The lines from the central control room to the buildings which had been used in the old audio system were still utilized to couple into the building transmitter and onto the steampipes at the top floor of each building.[6] The radio waves from the transmitter were conducted by the pipes and steel framework of the building to every room in the building, but at the same time these metal systems acted as a shield to prevent radiations from being received outside of the building.

The system operating on three watts was so low-powered that there was little danger of interference of any kind.

In addition to the line carrying the radio frequency to the buildings, the Brown Network retained the second line which was used as a direct audio intercommunicating system among the various section managers. Thus the points which were so connected became places at which programs could be picked up, sent back to the central control room and so out on the broadcast line to all of the other buildings. This plan was utilized in many cases for recorded programs, since many of the section managers had phonographs attached to their radios. The real value of the second line, however, lay in the fact that it provided easy communication among the staff members who had access to each other even while a program was going on.[7]

These developments in the Brown Network took place during 1937 and 1938. By the end of 1938 many refinements had been made in the Brown Network. Students in other colleges in New England, taking advantage of the experience of the Brown Network, became interested and developed similar systems. In 1939 there were student broadcasting systems at Wesleyan, Yale and Harvard.[8]

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[6]David W. Borst, A Handbook for College Broadcasting, p.19 of an unnumbered pamphlet.
[7]Ibid., p.19
[8]Ibid., p.1

The Brown Network received a good many letters from students in other colleges enquiring about the broadcasting system which they had built. The Brown Network was in touch with the broadcasting groups at Yale, Wesleyan, and Harvard. Abraham and Borst had been joined in the early days of the development of the Brown Network by Louis M. Bloch, Jr., of Cleveland, Ohio. Together they discussed the possibility of developing an intercollegiate broadcasting organization which would tie together all of the student broadcasting systems already in operation and stimulate students on other campuses to start such stations.

The creators of the Brown Network sent a questionnaire to all of the colleges in New England and adjoining states seeking information on student broadcasting activities and the possible interest in an intercollegiate organization of student radio stations. As a result of the information received on this questionnaire, a meeting was arranged at Faunce House at Brown on February 17 and 18, 1940.[9] At this meeting eight colleges actually became members of the Intercollegiate Broadcasting System, while a number of representatives from other colleges signified their intentions of starting to work to develop student stations at their colleges.

The purposes of the organization expressed on the occasion of its founding were, "To serve as a non-profit association of college and university broadcasting systems for the furtherance of education, entertainment, and good will among member colleges."[10]

The original members of the Intercollegiate Broadcasting system were:

CURC - Columbia University, New York, N.Y.

9"Collegiate Broadcasters Open First Convention," Brown Daily Herald, February 16, 1940, pp.1,3

10Constitution of Intercollegiate Broadcasting System, Article II

WMS - Williams College, Williamstown, Mass.

Crimson Network - Harvard College, Cambridge, Mass.

Brown Network - Brown University, Providence, R. I.

Pembroke College - Brown University, Providence, R. I.

R. I. State Network - Rhode Island State College, Kingston, R. I.

WES - Wesleyan College, Middletown, Conn.

UCBS - University of Connecticut

Some of the student stations were known by call letters derived from the name of the institution and the student radio club combined, while others called their station networks without using call letters, substituting the name of the institution, its colors, or its mascot.

As will be shown later these college stations are not networks in the sense that that word is used in commercial broadcasting, nor is the Intercollegiate Broadcasting System a network in that sense. Each college network is an individual broadcasting station.

The scenes that took place on the Brown campus as the originators of the intra-college broadcasting system strung wires first for their audio frequency intercommunication system and later for their radio frequency system began to be duplicated in various sections of New England and some of the nearby states soon after the first meeting of the interested colleges at Brown. Students began prowling through steam tunnels, climbing over the ridge-poles of the campus buildings, delving into the dark recesses of cellars and attics of college halls, and all for the purpose of stringing wires or making couplings to steampipes that the voice of the student broadcasting system might be heard.

CHAPTER II

DEVELOPMENTS AT OHIO STATE UNIVERSITY, RHODE ISLAND STATE COLLEGE, DARTMOUTH COLLEGE, WELLESLEY COLLEGE AND BROWN UNIVERSITY

The development of student radio stations at many of the colleges in which they are now operating has followed a very similar pattern. The different campuses have presented different problems, but fundamentally there is not much difference in the stations as they finally emerged from their experimental periods.

It may be of interest, however, to note some variations both in the means by which some of the student stations were established and in the actual operations of the various stations as they have been developed. Five such stations, therefore, will be described so that both the common features and the extent and nature of the differences among stations may be revealed.

Ohio State University

The idea for the Baker Broadcasting System at Ohio State University resulted from a news release of the Columbia Broadcasting System in the fall of 1940 which told of the Brown Network. Clair Tettemer, a student living in Baker Hall, read the release and thought it would be a good thing to have such a system in Baker Hall. Tettemer showed the release to L. A. Wrigley, superintendent of the dormitory, and explained to him the possibility of having such a system in Baker Hall. Mr. Wrigley encouraged Tettemer to explore the idea further and promised to lend his support.

Tettemer got in touch with Richard Ohlemacher, an engineering student with an amateur operator's license. Together they planned the layout of a small broadcasting station. The simple equipment which they planned they

estimated would cost no more than $50. Their system included an amplifier, a transmitter, and one microphone for their initial equipment. They intended to use the steampipes as an antenna. They submitted their plans to Andrew Hammerschmidt, chief engineer of station WOSU, the university's radio station. Mr. Hammerschmidt approved the plans.

Then came months of testing. Considerable difficulty was experienced getting a clear tone and in securing complete coverage of the dormitory. First, the steampipes were used as an antenna. This did not work out well. An outside antenna gave results that were little better. Then the copper roof of the building was hooked up as an antenna, but it gave so much radiation that the signal was picked up for miles around.

In the fall quarter of 1941, Harold Walker, an engineering student, and Leo Chak, an education student, became interested in the Baker Broadcasting System. Robert Tompkins began to work on publicity. New interest was aroused in the system.

Walker tested the equipment, redesigned one of the circuits, augmented the power and suggested the use of the house telephone circuit as an antenna. A small room on the mezzanine floor was made available to the boys, and on October 14, 1941, the Baker Hall election was broadcast as the first program from the new studio. BBS went on the air broadcasting on 9.5 watts at 550 kc. Programs were carried on intermittently for some time. A meeting for volunteers to work for the Baker Broadcasting System was called and 25 of the men in the house attended the meeting. This evidence of interest resulted in the approval of an appropriation for equipment for the studio by Mr. Wrigley.

The engineers drew up plans for the new equipment; and a requisition was placed for the service department of the university to build a parti-

tion to separate the control room and the studio.

The control room soon was outfitted with a transmitter, two turntables with power motors and two speeds, a four channel mixing panel, a monitoring system connecting with the studio, and racks for the 350 records and transcriptions. The studio equipment included three microphones, a floor stand, a table stand and boom stand for the microphones, a piano, and the usual studio furniture. In addition the equipment included a pre-amplifier for use on remote pick-ups.

The station was financed for a total of $661.70. Of this amount $225.54 was provided by the staff in equipment loaned or presented to the station, $76.91 came from the activities fund, and $359.25 came from the Baker Hall general fund. As most of the charges were non-recurring it was estimated that a budget of a relative small per cent of the total expenditure would take care of the finances of the station for some time to come. It was estimated that the expansion to other buildings would be rather costly if conduit must be used for the wiring. Such expansion in the near future, however, is doubtful because of the difficulty of procuring equipment and wire in view of the war situation.

Baker Broadcasting System, unlike many of the other student stations, does not accept advertising and hence must depend upon other sources of revenue. This fact does not seem to be a problem as its budget is fairly well assured.

Regular programs continued from the time when the BBS went on the air on February 6, 1942, throughout the entire spring quarter. Programs have been broadcast without serious interruption through the summer quarter also. Many of the staff members continued on through the summer because of the accelerated program, and have kept the station broadcasting on a regular schedule.

The production manager has used the resources of Baker Hall in developing his programs in order to keep a balance between the "live" programs and recorded shows. In the musical programs vocal, instrumental, and ensemble programs using talent from Baker Hall have been produced. Recorded music has been very popular on the schedule. There has been a call for popular dance tunes, well-known orchestras, and classical music. News broadcasts have been popular. These feature campus news, local city news, and world news. Remote pick-ups of special events have added variety to the schedule. Election of the officers of Baker Hall, information on campus elections, interviews with persons who are guests at Baker Hall, audience participation programs, amateur hours, telephone request programs are all used from time to time as special features. One very popular feature has been the dinner music which is broadcast every evening in the dining room over the public address system. Sometimes music has been furnished for house dances by means of records from the broadcasting studio. Dramatic shows have been successfully produced.

Moving picture trailers, transcribed portions of new moving pictures which star the original cast in dramatic episodes from the picture, have found a great deal of favor with the listeners.

Baker Broadcasting System has also broadcast many of the transcribed shows produced by various government departments. Some of these have been received direct from Washington and some have come through the offices of the Intercollegiate Broadcasting System in New York.

The log of the first all-day feature program which was broadcast on Mother's Day, May 10, 1942, from nine in the morning until nine at night, indicates the variety of programs that have been produced by BBS. The log shows that seven programs were picked up on a regular radio receiver from local Columbus stations and rebroadcast through the BBS to its

members. The student station itself produced five remote programs, travelling to pick-up points with its own equipment. Four electrical transcriptions were used. Most of the remainder of the programs were done by live talent, the programs being arranged by the BBS production staff.

In the late spring of 1942, Baker Broadcasting System joined the Intercollegiate Broadcasting System. Thus it allied itself with college broadcasting systems from various sections of the country and secured the advantage of exchanging ideas, manuscripts, and transcriptions, as well as benefitting from the advice of the IBS technical director.

Rhode Island State College

The Rhode Island State College Network was started in 1939 by John Stasukevich, a freshman. The attempt had to be abandoned because of lack of funds and lack of equipment.[1] During the summer vacation of that year, Stasukevich was in touch with David Borst, technical director of the Brown Network. Stasukevich got a thorough knowledge of the Brown Network's equipment and operation, learned how he could overcome many of the problems that defeated his first attempt, and started to work again on the project when he returned to college in the fall of 1939.

This time he got the services of Leo Hook, a mechanical engineering student, the help of the Electrical Engineering department, and began to lay plans. The college organizations advanced a loan for equipment. Work was begun on the station in January, 1940, and in April the station was in regular operation.

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[1] "Radio Network Due to Hard Work of Engineers," Rhode Island State Beacon, April 29, 1940, p. 3

PRODUCTION SCHEDULE

Station BBS Freq. 550 kc. Date May 10, 1942

SPECIAL PROGRAM FOR MOTHER'S DAY AND BAKER HALL OPEN HOUSE

Time	Program	Announcer	Production	Engineer	Studio
9:00 AM	SIGN ON				A
9:01 AM	Rise and Shine				B
10:00 "	Church of the Air				WBNS
10:30 "	Program Schedule of BBS				A
10:35 "	Southernaires (Prog in P)				WCOL
11:00 "	Welcome to Open House				REMOTE
11:15 "	John Mann				C
11:30 "	Music Makers				WBNS
12:00 N	News (Wm. Wear)				C
12:15 PM	Doorstep Interviews				REMOTE
12:30 "	It Burns				A
12:45 "	Star Parade				ET
1:00 "	Five Minute News				C
1:05 "	Dinner Music (Lt Classical)				B
1:45 "	Dick Sparks				C
2:00 "	BBS Goes Calling - Library				REMOTE
2:15 "	Sports Shorts				C
2:30 "	Organ Transcription				A-B
2:45 "	What is this thing c'd Music				A-B
3:00 "	Open House Program				REMOTE
4:00 "	Dinah Shore-vocalist of day				A-B
4:15 "	Star Parade				ET
4:30 "	IBS Interview				C
4:35 "	Swing High				A-B
4:45 "	Dick Sparks (keyboard)				C
5:00 "	BBS Goes Calling				REMOTE
5:15 "	Sports Shorts				C
5:30 "	Chester's Orchestra (trans)				ET
5:45 "	Treasury Program				ET
6:00 "	Silver Theatre				WBNS
6:30 "	Marine Play				A&B
6:45 "	Ink Spots				WCOL
7:00 "	Jack Benny				WLW
7:30 "	Fitch Bandwagon				WCOL
8:00 "	News Flashes				A-B
8:05 "	Numbers Please				A-B
8:30-10"	Numbers Please No.2				A-B
8:59-30"	Sign Off				A
9:00 "	Carrier Off				B

The control room and studios are located in Edwards Hall, a centrally located building on the campus, thus making all transmission lines to dormitories and houses as short as possible. The studios were built as music rooms and are semi-soundproof. The following description of the Rhode Island Station by Stasukevich is a good example of a student station doing campus-wide broadcasting.

> The radio transmitter is a small unit capable of deliverying a a few watts of radio frequency power. It follows the convenional type of master-oscillator-power-amplifier design, the oscillator being of the electron coupled variety built with low drift tank capacitors to minimize the frequency drift.
>
> The operating frequency used is 565 kc.
>
> The transmitter is modulated by a single tube which is preceded by several stages of pre-amplifiers. One of these stages is called the master gainstage, which controls the percentage of modulations to a greater degree manually than any of the other stages. The pre-amplifiers are housed with the mixing and fading panels and can easily operated by a control man. There are six such pre-amplifiers wired in parallel all feeding into the master gain stage which means that the several microphones may be used simultaneously, each receiving separate amplification. Only in the case of the two transcription turntables is there no amplification. These channels too, lead directly to the master gain stage. The mixing panel has added features such as modulation level indicators and both radio frequency and audio frequency monitoring. The transmitter, including modulator and master gain stage, is mounted on a relay rack. Radio frequency coupling devices are also mounted on this rack along with the power supplies. The mixing panel, line input stations, and transcription tables comprise the control desk.
>
> The audio frequency lines are the common twisted pair telephone lines and originate at such places as the different auditoriums, gymnasiums and other buildings. These lines are used in conjunction with a portable amplifier for remote broadcasts. The radio frequency lines are similar and are coupled to the transmitter at one end and to a tank circuit at the other end. This tank circuit is in the vicinity of the fraternities and dormitories and from this tank a single strand of wire is run to all the neighboring houses. This system has proved to have little tendency to radiate over any great distance.[2]

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[2]John Stasukevich, "The Rhode Island State College Network," IBS Bulletin, I (December, 1940). p.3,4

The Dartmouth Broadcasting System

The development at Dartmouth has been different from that of any of the other college stations. A group of a half dozen Dartmouth students started in the fall of 1940 to work on a plan for a student broadcasting system. Their efforts met with little success. An editorial in The Dartmouth, student daily newspaper, April 15, 1941, said that although the students had followed every proper procedure known to them in order to insure the acceptance of their plan by the administration, it looked as if they were going to be turned down by the Committee on Student Residence which was concerned with dormitory disturbances already attributed to radio.[3]

The Dartmouth, in its efforts to further the cause of radio, pointed out that the reasons advanced by the students for the establishment of a student radio station were good reasons: that radio would provide a training ground for skills and techniques in anticipation of the college's participation in radio broadcasting which seemed to be forecast by the appointing of a College Council on Radio; that the student station would provide radio fare better adapted to the college community; and that the student station would provide interested undergraduates with an opportunity to gain skills and techniques and realistic experience in a field in which they might be interested as well as provide a laboratory for experimentation in radio production.[4]

Subsequent issues of The Dartmouth helped to advance the cause of the Dartmouth Broadcasting system. The issue of May 9, 1940, announced that the Radio Council at its meeting the previous day, had granted the Dartmouth Broadcasting System a license to operate.

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[3]"We're for Radio: I," The Dartmouth, April 15, 1941, p. 2

[4]Ibid., p.1

In granting the license to the Dartmouth Broadcasting System, the institution also granted a long-term loan with which to finance the system.

DBS planned to go into operation immediately, broadcasting to a few dormitories. Their studios, located in Robinson Hall, were, by the following fall, wired to seventeen dormitories on the campus.

The Dartmouth Broadcasting System was patterned after the one at Brown University and the other systems already in operation. Audio signal is carried from the studios at Robinson Hall over special telephone wires to each dormitory. At each dormitory a small oscillator unit changes the audio signals to radio frequency which are picked up by the radio sets in the dormitory on a frequency of 570 kc.[5]

While the student broadcasting system in each institution is, in the last analysis, responsible to a faculty advisor or activities committee, they are usually governed by the general rules that apply to all student activities. The Dartmouth Broadcasting System is somewhat different in this respect and must show that it has lived up to the terms of the previous license granted. The College Radio Council bears about the same relation to the Dartmouth Broadcasting System as the Federal Communications Commission does to the individual commercial radio station.

Included in the license, which covers specifically all of the features of the Dartmouth Broadcasting System's activities, is the statement that the intramural system will operate in accordance with the general educational objectives of the Radio Council.[6]

The operation of DBS rests with a committee of three: an undergraduate

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5"DBS Operates on Controlled Wire Broadcasting Plan," The Dartmouth, May 9, 1941, p.1

6"Radio Council Grants License for Intramural Network," The Dartmouth, May 12, 1941, p.1

Station Manager, a representative of the Radio Council of Dartmouth College to be named by the Council, and the Junior Business Manager-elect of The Dartmouth as Advertising Director. The station manager has general oversight of the financial affairs of the network and of the operating directorate of seniors set up by the Executive Committee, with the approval of the Radio Council. The representative of the Radio Council serves as liaison officer for the Radio Council and its Program Committee. The advertising director supervises all advertising activities. The junior directorate of The Dartmouth acts as the advertising agency for the DBS and for this service The Dartmouth receives fifteen per cent of the revenues from local and national accounts.

Revenues are disposed of under the supervision of the Radio Council. Disposition includes: rental of studio, equipment, and transmission lines payable to Dartmouth College. This amount is sufficient to cover interest at five per cent and amortization of the original amount advanced by the College. The operating and program expenses come out of advertising revenues. A sinking fund out of which future equipment may be bought and improvement of facilities or extension of the system may be provided also comes out of advertising revenues.

The station is allowed to broadcast between five and six in the evening and for two hours somewhere between 7:30 and eleven at night. Exceptions to this rule are made for special broadcasts.

For the first year the station was allowed to have as much as fifty per cent of its time in sponsored time. Programs are arbitrarily divided between educational and entertainment with 25 per cent being educational and 75 per cent entertainment.

Though it is recognized that there can be more latitude for programs heard only on the campus, in general the station is charged to adhere to

the standards of good taste and the regulations for the presentation of controversial issues outlined in the NAB Code.

The station is charged with keeping a complete program log subject to inspection at any time by the Radio Council.

The Wellesley Broadcasting System

Another student radio station which followed a different line in its development is WBS at Wellesley College, Wellesley, Massachusetts.[7] This system is the first system serving a women's college exclusively. Pembroke College, women's college at Brown University, has been included in the Brown Network since its origin.

Interest in campus broadcasting began in the spring of 1941 at Wellesley. It was suggested to Rosamond Wilfley, '42, by a professor of English composition. Miss Wilfley discussed the matter with several of the girls and found them interested. She then talked over the plan with Miss Mildred H. McAfee, president of the college. It was decided to investigate the possible expense of establishing such a system. During the summer vacation Miss Wilfley received a letter from Miss McAfee stating that "the father of a friend" of Rosamond's was interested in the idea and had offered to set up the equipment for the student station.

Tests were made in the fall and it was found that a student station could be operated satisfactorily on the Wellesley campus. The benefactor, Mr. Hill Blackett, vice president of the firm Blackett, Sample and Hummert, which has worked in radio for many years, and father of Priscilla Blackett, '42, on receiving the favorable report, wrote to go ahead on

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[7] "Wellesley Will Hear Voice of WBS Today," Wellesley College News, April 20, 1942, pp.1-4

the project.

Owing to delays in getting the necessary equipment the station did not begin actual broadcasting until April 20, 1942.

WBS utilized the college light system to carry the signal from the transmitter to the various buildings on the campus. This plan was feasible because the college has its own power supply. The output of the 20-watt transmitter remained within the radiation tolerance since the wires are in underground conduit. The station chose a spot near 730 on the dial.

WBS is organized into thirteen committees to carry on the station activities. Four unit directors under the direction of a coordinator prepare the broadcasts from the contributions of the various other committees. These committees include: the varieties and quiz programs committee, music, manuscripts, drama, announcers, current events, business, publicity, and production apprentices.

WBS was inaugurated with a full hour broadcast from five to six o'clock. Rosamond introduced President Mildred H. McAfee who gave a short talk on the value of such a college radio station. Then a variety of features indicated some of the sources from which future broadcasts would be developed.

The brief descriptions of the developments at Ohio State University, Rhode Island State College, Dartmouth College and Wellesley College, indicate the wide variety of institutions at which student broadcasting systems are operating and the conditions under which they started. Ohio State University, while it is one of the largest state universities, has, as yet, a small station confined to one dormitory. It was financed by

the members of the station staff and by money from the dormitory fund. Rhode Island, also a land grant college, and co-educational, as is Ohio State, has a campus-wide system financed by a loan from the student organizations. Dartmouth is a men's college, a private institution. Its system was financed by a loan from the college to be paid back from advertising revenues, as is the case with Rhode Island. Wellesley, a woman's college, got its station as the result of the generosity of the father of one of the students.

While some of the systems cover only a section of the campus, a survey made by the Intercollegiate Broadcasting System among five of the original member stations showed practically that complete coverage of the student body is possible whether they live in dormitories, fraternity houses or in the homes of faculty members. Coverage is possible to points a considerable distance from the campus, e.g., Brown University, where the Brown Network broadcasts to Pembroke College, quite some distance from the Brown transmitter.

Late in 1939, David Borst, technical manager of the Brown Network, brought out a handbook of information on student broadcasting stations that has served as a valuable reference to technical directors of student stations. This handbook included information on the experimental work done by the Brown Network, minimum equipment requirements for starting a student broadcasting station, numerous blueprints, and a detailed discussion of the Brown Network equipment. Mr. Borst's discussion of the Brown Network's equipment which was in operation at the time that the Intercollegiate Broadcasting System was founded, shows the pattern from which most of the student stations took many, if not all, of their ideas.

Most of the equipment (of the Brown Network's control room) was mounted on standard rack panels in a two bay relay rack. This bay was placed along the left side wall at one end of the studio, enough room being left behind the rack to allow for repairs and additions to the equipment to be made easily. Most of the chassis are of the dishpan type contruction, with the tubes mounted horizontally. Some of these chasses are arranged so that the front panel may be removed without removing the chassis from the rack. This allows repairs to the internal wiring as well as tube replacements to be made without having to take chassis down.

The racks in the control room of the Brown Network were constructed of finished two by four lunber, and the panels cut from one quarter inch tempered Masonite. A flat black paint, carefully wiped when half dry, gave the rack a black satin finish. Metal racks are preferable, of course, but the wooden ones cost less and serve well.

The eight-channel mixer is mounted behind a slanting panel on which is mounted the gain controls, key switches, and volume indicator. This panel is at right angles to the relay racks and the operator sitting behind it faces the room. The turntables and pick-ups are mounted on a table which is on the other side of the operator, and at right angles to the mixing panel. The operator sits within the U-shaped enclosure made by the relay racks, mixing panel, and phonograph table, and therefore has within easy reach all of the essential equipment necessary to put on a program. The space is large enough to accommodate another man in front of the racks when a more complicated program is going to be broadcast. If necessary, there can be others to operate the phonograph turntables on the other side of the phonograph table.

Microphone outlets are provided on either side wall of the studio as well as in front of and behind the table holding the program mixer. These are mounted near the floor and standard amphenol conductors are used. A.C. outlets are provided on either side of the studio as well as behind the relay racks and under the phonograph table. The room is sound-proofed with insulite wall board, the cracks between the sheets of wall board being covered with one-half inch finished lath. All studio wiring is done with shielded wires: and No. 2 pushback wire is used for voltage loads and No. 14 puxhback wire for heater loads.

All of the signals entering or leaving the studio do so by way of two lines panels. The one for the campus lines is provided with seven vertical rows of banana jacks. There are eight jacks in each row, and an additional row of phone jacks on the bottom. Each row of jacks is wired to a separate line, so that eight different connections may be made to any line, and also a pair of phones may be placed across the line to ground. On either end of the board are a number of shielded wires ending in large bana plugs which may be inserted in the jacks of

any line desired. The plugs on the left side of the board go, from top to bottom to the campus lines, channel on the rehearsal board, to the r.f. coupler, and to the first position on the radio monitor amplifier five point switch. The plugs on the right side go to the line amplifier output, to the communications amplifier output, to the right key switch on the program mixer and to the left key switch on the program mixer, both key switches going to the campus lines channel. Jumpers are provided for connecting two lines together.

The telephone lines panel is arranged in a similar manner. There are only three telephone jacks in a row, and only three rows of jacks. More may be added. The telephone plugs are wired with twisted pair and go on to the left side to the rehearsal board telephone lines channel and output of the telephone line amplifier; and on the right hand side to the right and left key switches on the telephone channel of the program mixer.

All the signals comprising the program must pass through the eight channel mixer. The volume of any channel may be varied independently of the volume of the other channels. Key switches select which channels are to be used, and also perform other functions such as turning the studio speaker on and off, starting or stopping the phonograph motors, and making it possible to put the cue signals on a line or to talk over a line. They also connect any of the six right hand channels to the rehearsal board when in their up position.

From the program mixer the signals pass to the master gain panel. A control at this point varies the level of the entire program. At this point some of the signal is rectified and fed to the volume indicator on the program mixer panel. The master gain board is also provided with facilities for monitoring the audio signals at the board and at the r.f. output of the campus transmitter.

The output of the master gain board goes to four possible places; the transmitter, the telephone amplifier, the line amplifier, and the studio monitor amplifier. The gain of all the amplifiers may be varied by the controls which are on the front panels of all but the telephone amplifier which is located on the back. The line amplifiers are provided with circuit opening jacks so that they may be disconnected from the present circuit and patched for some other use by plugging patch cords into the proper jacks. The monitor amplifier may be disconnected from the master gain board by setting the selector switch on some other position than position 2.

The radio frequency output of the transmitter goes to the radio frequency coupling panel and then to the campus line panel where it is connected to the proper line. The output of the telephone

line amplifier goes to the telephone line panel. The output of the line amplifier goes to the campus line panel, and also to the mixing panel where it is used to send cue signals over both telephone and campus lines.

Besides this main program circuit a second one is provided for rehearsal purposes. It is composed of a second eight panel mixer so that any circuit going to the program mixer may also be sent to a corresponding control on this second mixer or rehearsal board. This allows equipment to be tested, records to be auditioned, and line circuits to be set up without disturbing the main program in progress. The output of the rehearsal board may be put on the studio monitor speaker by setting the selector switch on position 3, or it may be patched to some other piece of equipment on the rack.

For inter-communication between the dormitories over the secondary lines a separate microphone, amplifier, and speaker is provided. The output of the amplifier may be connected to any line by means of a plug on the campus lines panel, but it is usually left on line 2. The output of this amplifier is also fed to the center position of the campus lines key switches so that communication over a line which is about to be used to bring in a program may be had without plugging in more than one jack.

For communication over telephone lines a telephone handset and ringer is provided. This is wired to the center position of the telephone lines key switches so that it is possible to talk over any line which is about to be used for sending a program.

A separate power supply is provided for the program mixer, master gain panel, telephone line amplifier and rehearsal board. All other pieces of apparatus have self-contained power supplies.[8]

With such complete information available and with blueprints of the equipment and drawings of the circuits the Brown Network was ready for the many technical questions which were bound to arise at the meeting of the colleges interested in student broadcasting scheduled on February 17, 1940, at Brown University.

The rather rapid development of interest in student "broadcasting,"

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[8] David Borst, A Handbook for College Broadcasting, pp. 10-16 of unnumbered pamphlet.

which took place in various sections of New England and adjacent states as evidenced by the inquiries received by the staff of the Brown Network, made the possibility of an organization of student radio stations seem entirely feasible.

CHAPTER III

THE INTERCOLLEGIATE BROADCASTING SYSTEM

The Intercollegiate Broadcasting System which grew out of the meeting at Brown University in Providence, R. I., on February 17 and 18, 1940, has had a steady growth. The original eight stations which formed the IBS at that time have increased to twenty stations in colleges in ten different states and the District of Columbia.

Included among the Intercollegiate Broadcasting System membership are:

CURC - Columbia University, New York, N. Y.

CRG - Cornell University, Ithaca, N. Y.

WHC - Hamilton College, Hamilton, N. Y.

UBS - Union College, Schenectady, N. Y.

WMS - Williams College, Williamstown, Mass.

Crimson Network - Harvard University, Cambridge, Mass.

Brown Network - Brown University and Pembroke College, Providence, R.I.

R. I. State Network - Rhode Island State College, Kingston, R. I.

UCBS - University of Connecticut, Storrs, Conn.

WES - Wesleyan College, Middletown, Conn.

WOCD - Yale University, New Haven, Conn.

WPRU - Princeton University, Princeton, N. J.

GBS - Georgetown University, Washington, D. C.

Hampton Institute - Hampton, Va.

WKC - Knox College, Galesburg, Ill.

BAMA - University of Alabama, Tuscaloosa, Ala.

WBS - Wellesley College, Wellesley, Mass.

Swarthmore Network, - Swarthmore College, Swarthmore, Pa.

ABS - Antioch College, Yellow Springs, Ohio

BBS - Ohio State University, Columbus, Ohio

All of these stations, except WBS, Swarthmore Network, ABS, and BBS, are Class A stations and accept advertising.

The constitution of the Intercollegiate Broadcasting System which was accepted at the first meeting of the group explains the purposes and functions of the Intercollegiate Broadcasting System.

CONSTITUTION OF THE INTERCOLLEGIATE
BROADCASTING SYSTEM

As of December 28, 1940

Article I: Name

The name of the organization shall be the Intercollegiate Broadcasting System.

Article II: Purpose

This organization shall serve as a non-profit association of colleges and university broadcasting systems for the furtherance of education, entertainment, and good will among member colleges.

Article III: Membership

Membership in the Intercollegiate Broadcasting System shall be open to all colleges and universities.

Section 1. Institutions having systems confined to the campus and accepting advertising shall be known as Class A members. The Intercollegiate Broadcasting shall act as the clearning house for the advertising activities of all Class A members.

Section 2. Institutions having systems confined to the campus and operating on a non-commercial basis shall be known as Class B members.

Section 3. Institutions having wireless radio transmitters at their disposal shall be known as Class C members. They may appoint the Intercollegiate Broadcasting System national advertising representatives.

Section 4. Institutions with broadcasting systems under construction shall be known as Trial members. Trial members shall report to the Executive Committee on their activities and the Executive Committee shall decide on their active status within one month after an application for full membership has been received.

Section 5. Institutions without broadcasting systems, but with facilities for recording may become Affiliate members of the Intercollegiate Broadcasting System, provided they live up to the activity requirements set by the Executive Committee.

Section 6. The Executive Committee shall pass on all applications for membership in the Intercollegiate Broadcasting System, and determine the class of membership of all affiliated colleges.

Section 7. The Executive Committee may remove from membership any member college, upon sufficient proof of inactivity.

Article IV

Section 1. The Governing Board of the Intercollegiate Broadcasting System shall consist of three representatives from the Executive Board and one representative from each Class A, B, and C member station. The Governing Board representative from each college shall be elected by the college.

Section 2. All ordinary decisions of the Governing Board must be approved by a majority of the total IBS membership.

Section 3. Only colleges contributing financially to the IBS shall have the power to vote on financial matters. Final decision on the eligibility shall rest with the Governing Board.

Section 4. Any decision of the Executive Committee may be overruled by the Governing Board by a two-thirds vote of the total IBS membership.

Section 5. The Governing Board shall have the power to remove any Executive Committee Officer for due cause by a two-thirds vote of the total IBS membership. The By-laws shall be proposed by the Executive Committee, recommendations coming from members of the Committee or from the member colleges.

Section 7. Voting may take place at a Governing Board meeting or through the mails.

Section 8. The Governing Board shall meet at least once a year, at the annual convention of the Intercollegiate Broadcasting System.

Article V: Executive Committee

Section 1. The Executive Committee shall consists of a Chairman, an Executive Secretary, and the Business, Technical and Program boards.

Section 2. Once each year, the Governing Board shall elect by a majority vote of the IBS membership, the Chairman, the Executive Secretary, and the Managers of the Business, Technical, and Program Boards of the Executive Committee. These officers shall preferably not be undergraduates in any institution.

Section 3. The Executive Committee of the IBS shall transact the day-by-day business of the system, shall direct its activities, and coordinate its members.

Section 4. The Executive Committee shall have the power to appoint sub-committees at the member colleges to help carry on the official functions of the Committee.

Article VI: Annual Convention

Section 1. An annual convention shall be held each year. The place and date of such convention shall be decided by the Executive Committee, such decision subject to change by a two-thirds vote of the Governing Board.

Section 2. During the convention, a meeting of the Governing Board of the Intercollegiate Broadcasting System shall be held, at which time all important matters of policy for the forthcoming year will be decided upon.

Article VII: Amendments

Amendments to the IBS Constitution shall be proposed by any member college through the Executive Committee and shall be passed by a majority of the Governing Board membership of the IBS.

Amendment 1. For the election of the Executive Committee, only one Executive Committee Governing Board representative shall have the power to vote. This person shall be appointed by the Executive Committee.

BY-LAWS - INTERCOLLEGIATE BROADCASTING SYSTEM

1. Any college with a network or broadcasting board is entitled to membership on the Governing Board of the IBS, under the rules of membership as given in the constitution.

2. All applications for membership in the IBS shall be made to the Chairman of the Executive Committee.

3. The Executive Committee shall announce the place and date of the Annual Convention at least one month before the date set.

4. Any member college may vote at the annual convention by assigning a written proxy to any other member college representative.

5. Any member college not able to attend the convention may submit in writing a proposal it desires to have acted upon by the convention, and its vote upon the proposal.

6. Trial members shall report to the Executive Committee on their activities, and the Executive Committee shall decide on their active status within one month after an application for full membership has been received.

The officers and committees elected to carry on the work of the Intercollegiate Broadcasting System for 1941 indicate the interest of the member stations in the IBS and the considerable degree to which they engaged in its activities.

The roster included:

Executive Committee

Chairman - George Abraham, Harvard Graduate School, Cambridge, Massachusetts
Technical Manager - David Borst, General Electric Company, Schenectady, New York.
Executive Secretary - William Tyng, Harvard University, Cambridge, Massachusetts
Program Manager - Alan R. Eurich, Williams College, Williamstown, Massachusetts
Productions - Lawrence Lader, Harvard University, Cambridge, Massachusetts.
Programs - Robert Stuart, Wesleyan; Myron Curry, Brown; Jay Harris, Cornell

Business Manager - Louis M. Bloch, Jr., IBS Office, Columbia University
Ass't Business Manager in Charge of Sales - Morton Weber, Columbia Univefsity
Ass't Business Manager in Charge of Advertising - Peter V. B. Thorpe, Brown
Director, Business Relations - Paul Rishell, Williams College

Sub-Committees

Record Library, Record Exchange and Record Filed: Williams College, Williamstown, Mass. Directed by Alan R. Eurich.

Publication of IBS Bulletin: Cornell Radio Guild.

Investigation of Frequency Modulation Possibilities: William R. Hutchins (Columbia), Granger Tripp, Union

Lines from New York to Boston, in re WRUL: George Abraham, Harvard Graduate School; Lawrence Lader, Harvard

Compilation of Directory of Member Stations: Morton Weber, Columbia

Inter-College Communications, via Short Wave: John Stasukevich, Rhode Island State

Personnel Directory and Forms: Peter V. B. Thorpe, Brown University

Investigation of Incorporation of IBS, from states indicated: Connecticut - Henry Elyosius, Brown; Rhode Island - Louis M. Bloch, Jr., Business Manager; Pennsylvania - Howard Tompkins, Swarthmore; Virginia - W. Raymond Burrows, Hampton Institute; New York - Through Columbia Law School students; Massachusetts - Lawrence Lader, Harvard; New Jersey - Through Princeton Broadcasting Service

Mimeographing, Public Relations, Mailing, Press Relations, Publicity: New York Office at Columbia University, Director - Morton Weber

Following the meeting at Brown University at which the Intercollegiate Broadcasting System was formed in February, 1940, the activities of IBS were administered from Brown. The June following the organization of the IBS, Abraham, Borst, and Bloch, all of whom were instrumental in the founding of the organization, graduated. Each, however, continued his interest in the system and continued as a leader, giving the system the benefit of the experience they gained over a four-year period in student broadcasting station work.

Following graduation Borst went with General Electric in their Lynn, Massachusetts, plant, and later went to Schenectady, New York. Abraham went to the Harvard Graduate School to continue his studies. Bloch located in New York where the IBS office was now located in Columbia University. All three were within easy travelling distance of several of the member stations of the Intercollegiate Broadcasting System. Together with the undergraduate officers and committee members they planned and furthered

the expansion of the Intercollegiate Broadcasting System.

Among the services which the IBS furnishes member stations are: technical information, national advertising solicitation, script and record exchange, and a monthly bulletin. Member stations are kept in touch with the latest technical developments that might be applicable to campus broadcasting through the IBS Bulletin. Special help is available free of charge to students who wish to get the necessary information to start a student broadcasting system, or who are having problems that they don't seem to be able to clear.

One of the first problems when the IBS was founded was that of finances. There are no membership fees charged the member organizations and no initiation fees. The only source of revenue to the IBS is through advertising. The IBS representative, Intercollegiate Broadcasting Station Representatives, solicits national advertising for the member stations, keeping a percentage of the fees for the maintenance of the organization and the services which are rendered to the member stations.

Early in 1941 the Intercollegiate Broadcasting System was incorporated as a non-business corporation under the laws of the State of Rhode Island.[1] At about the same time Business Manager Louis M. Bloch, Jr., moved the IBS offices from Columbia University to 507 Fifth Avenue, New York City. Several well-known national advertisers began to use the facilities of IBS to advertise their products to the student audiences.[2] Among advertisers using the student radio stations were the R. J. Reynolds Tobacco Company, Beechnut Packing Company, and Standard Oil of New Jersey. Various of these advertisers use all of the Class A stations of the IBS,

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[1]"IBS Now Incorporated," IBS Bulletin, I (March, 1941) p.1

[2]Louis M. Bloch, "Ivy Halls and Gaspipes," Broadcasting, XXII (May 25, 1942) p.48

others use stations in certain areas to tie in with their advertising coverage plans. The Princeton Broadcasting Service has had accounts with Brooks Brothers and Finchley, Inc.; The Seymore Hotel contracted for a series of twenty-five spots on the Williams Network; and Finchley, Inc., signed with the Brown Network for a series of programs.

In addition to these programs some of which were transcriptions and some of which were spot announcements, as early as the spring of 1941 plans were underway to link by direct telephone line the student stations at Cornell, Princeton, Brown, Rhode Island State, Williams, and Wesleyan for an actual network hook-up for advertising purposes. National advertisers, as well as the shopkeepers about the college campuses seemed to look upon the student broadcasting stations as a good medium through which to reach students.

The Intercollegiate Broadcasting System, in addition to its activities as advertising representative of the student stations, also explored the possibilities of short wave broadcasts to the students of South America.[3] A Pan-American Department was organized with Lawrence Lader of Harvard as director, Nelson R. Gidding as script writer, Robert S. Kieve, Bulletin Editor, and Lincoln Diamont, Jonathan Duthie, George George, Jean McInnis and Richard Kleenman serving on the board.

The purpose of the IBS Pan-American Department, said the Pan-American Bulletin, was "to bring the students of North and South America into closer understanding through the common voice of radio."[4]

The Pan-American Department, realizing the importance of the pro-

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[3]"NBC to Short Wave Student Exchange Program," Pan-American Bulletin of IBS, (July 28, 1941), p.1

[4]Ibid., p.2

posed broadcasts, sought the help of eminent people in radio and education who were familiar either with the technical problems of the undertaking, or who had an understanding of South American countries. The Pan-American Department Advisory Board includes a group of well-known people.[5] Among the members are:

Leonard Power, United States Office of Education
Philip Leonard Green, U. S. Department of Agriculture
Philip H. Cohen, Chief, Radio Division of Library of Congress
Dean Howard M. LeSourd, Boston University, Chairman of Institute of Oral and Visual Education
Charles Siepmann, former director of Program Planning for B.B.C., now adviser to Harvard on radio
Walter Lemmom, founder and president, World Wide Broadcasting System
William Harris, Coordinator of Western Hemisphere Programs, World Wide Broadcasting Foundation
John Sheehan, Program Manager, WGEO-WGEA, General Electric
Franklin Dunham, Educational and Religious Director, National Broadcasting Company
Dean Reginald Phelps, Harvard
Miss Agnes Mongan, Fogg Art Museum
Dr. Homer Arjona, Spanish Department, University of Connecticut
Professor Norman Bennetton, Spanish Department, Union College
Dr. Aurelio Espinosa, Spanish Department, Harvard

With the help and advice of the Pan-American Advisory Board, IBS arranged a series of four programs to be broadcast to South America by NBC's short-wave transmitters.[6]

Four programs were arranged opening with a salute to the University of Sao Paulo, Brazil, which was broadcast at 7:30 P.M., E.D.T., August 15, 1941. The program honored the University of Sao Paulo as the first South American member of The Intercollegiate Broadcasting System and was broadcast in Portuguese. The program was arranged as an exchange program with the Brazilian students broadcasting back to the United States in English. The arrangements were not completed in South America, but IBS presented

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[5] Ibid., p.2
[6] Ibid., p.1

its part of the program.

The other programs in the series were: August 29, broadcast to the National University of Bogota, Colombia; September 15, to William James Camp, Colima, Mexico; and September 26, to San Marcos University, Lima, Peru. The National University of Bogota was honored for the growth of its technical schools. The program to William James Camp at Colima, Mexico, gave a documentary story of how the students of both countries worked side by side to rehabilitate the earthquake stricken town. The program to San Marcos University, Lima, described the growth of the student exchange plan.

To bring the programs to the attention of the students in South American colleges, the Intercollegiate Broadcasting System had representatives in many of the countries below the Rio Grande writing articles for the newspapers and magazines and cooperating with the local ministers of education.

In Brazil, Trajano Pupo Netto, President of the Unaio Nacional dos Estudantes, arranged to have the Federal Station rebroadcast the IBS program from New York over the Brazilian Federal Hour, Carlos Calderon, a student at Harvard during the winter collaborated with Augustin Nietto-Caballero, Rector of the National University at Bogota. Manuel Prado, son of the President of Peru, and Charles Gibson, son of the Vice-President, are representatives of the Intercollegiate Broadcasting System in Lima.[7]

Since the Intercollegiate Broadcasting System does no regular broadcasting, and since none of its member stations have facilities for broadcasting beyond their campuses, the programs were arranged, scripts written, and casts rehearsed by the Pan-American Department of IBS. Actors were gleaned from International House at Columbia University where there are

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[7] Ibid., p.3

usually students who speak Spanish and Portuguese. The scripts were first written in English and then translated. The shows were broadcast under the supervision of NBC's announcers.

This "Good Neighbor" policy of the IBS had to be abandoned entirely with the entry of the United States into the war. The Pan-American Department has hopes that the plan will be expanded with the cessation of histilities and that exchange broadcasts between the Americas will be a regular IBS activity.

The Intercollegiate Broadcasting System had among its plans for 1941 the investigation of the possibility of rebroadcasting Frequency Modulation programs over the college broadcasting systems. Frequency Modulation is the comparatively new plan for broadcasting which gives high fidelity reception, free from static and other extraneous sounds. It is available to a relatively few people because it requires a special receiver and these receivers are owned by only a small number of people.

Wired wireless, the system on which the student stations operate, use extremely low-powered transmitters to send the signal. This has two significant results: No receiver outside the prescribed area of the wires can pick up the college station's programs; and although long wave and working on amplitude modulation, which is the regular radio wave length, they are in effect staticless. The IBS saw in this situation the possibility to rebroadcast Frequency Modulation programs with little or no loss of fidelity.

When the plan was proposed to the Frequency Modulation stations, they saw in the plan an opportunity to increase their audiences by many thousands. The plan had mutual benefits. It would make the programs of the FM stations available to the students over their regular receivers.

Columbia University's CURC in New York has been rebroadcasting the programs of WOR's FM station, W71NY, since November, 1941. The Husky Network of the University of Connecticut, the Cardinal Network of Wesleyan University, and the Yale Broadcasting System have been rebroadcasting the programs of W65H, Hartford, Connecticut, since January, 1942.[8]

Now twelve college stations in New England, New Jersey and New York are equipped with translators and receive and rebroadcast frequency modulation programs regularly. The programs originate at the FM station W63NY in New York and are picked up and carried by FM stations W2XMN, New York; W65H, Hartford; W43B, Boston; W39B, Mt. Washington, N.H.; and W2XOY, Schenectady, New York. The colleges carrying these FM network broadcasts regularly are: Harvard, Yale, Princeton, Columbia, Brown, Williams, Dartmouth, Wesleyan, University of Connecticut, Rhode Island State, Union and Hamilton.[9]

With the coming of the war the Intercollegiate Broadcasting System saw an opportunity to cooperate in the war effort. In campus defense, students have been instructed to keep tuned to the college station as much as possible. Lines have been connected directly to the administration offices to allow the officials to communicate with the student body in case of emergency. During an actual air-raid the college station may be the only radio station allowed to stay on the air, since radiation from the station doesn't exceed 262 feet from any building.[10]

The Intercollegiate Broadcasting System is cooperating with many government agencies in furthering the war effort by distributing to its member

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[8]Bloch, op. cit., p.49
[9]Ibid., p.49
[10]Ibid., p.49

stations transcriptions and publicity material. Cooperating with the OEM, the War Department, the Navy Department, the Treasury Department, and the United States Office of Education, the IBS Program Department distributes approximately eight fifteen-minute transcribed programs every week to each of the twenty member stations. The programs all connected with the war effort, include such shows as "The Treasury Star Parade," and "You Can't Do Business With Hitler." In addition the IBS handles script and announcement material from these agencies.[11]

Further expansion of the Intercollegiate Broadcasting system will probably be much slower than that in the last two years. The inability to get necessary equipment, speeded up academic programs claiming more of the student's time, and extra responsibilities due to war conditions will probably all tend to put off further expansion.

Some new stations may be added from among colleges where the necessary broadcast equipment is already available and only awaits somebody to put it to broadcast use. A case in point is Ohio University, which is at present a trial member of IBS. John D. Metzger, leader of the interested group on the campus, says the group has a new transmitter built by the boys in the Electrical Engineering department, the necessary oscillators and amplifiers, a half dozen microphones, two portable recording outfits, plenty of recorded music and some sound effects records. Many of the student stations now broadcasting started with less equipment than that.

The real interest in student broadcasting stations as evidenced by the time and even money that the station staffs are willing to put into them, would seem to indicate that this type of extra-curricular activity is due to continue to expand.

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[11]IBS Release, May 21, 1942

CHAPTER IV

CRITICAL EVALUATION OF PRESENT STATUS

Having indicated the manner in which student broadcasting stations originated, having described typical stations now in operation, and having traced the development of a national organization which serves the stations and stimulates the development of such enterprises in additional colleges and universities, let us now examine the whole movement critically. What contributions have been made, what weaknesses exist, and what recommendations can be made with regard to future development?

Values of the Student Stations

The student broadcasting station has certain values for the students, the general student body, and for the college or university administration.

1. The station furnishes opportunities for student participation in activities which are both popular and varied in type.

On the twenty American campuses where student broadcasting stations are now in operation, such stations are taking their place alongside the campus newspapers as a popular extra-curricular activity. The campus newspapers have encouraged the establishing of the stations and in some cases such as at Harvard and Dartmouth, the student daily is the sponsoring organization.

The number of students directly connected with the student broadcasting station varies with the size of the unit. In the case of the Baker Broadcasting System at Ohio State University, which serves one large dormitory, twenty-eight students were on the staff when the station started broadcasting. Cornell University's student station, covering most of the large campus at Ithaca, has had as many as three hundred students on the staff at

one time![1] Students who get some radio experience through the student station number into the hundreds if one considers the programs of the musical clubs, the dramatic groups, and other student societies that are presented in the course of a year.

2. Students gain experience of a pre-vocational nature.

The student broadcasting station opens up opportunities for students to gain experiences of a sort which have in some cases not been previously available to students. An engineering student for example, builds much of the equipment, sets it up, tests it, maintains it, and operates it when the station is broadcasting. Such activities are not occasional laboratory experiences, such as a student would secure in formal courses where it is necessary to move onward rather rapidly to cover a given area. As a member of the technical staff of the student broadcasting station, he is called upon frequently to serve in any one of several capacities.

To the student participating in radio production, the student broadcasting station serves as a laboratory in which to put into practice the things learned in English, speech, and content courses, and in addition affords the student an opportunity to develop ideas of his own. To those participating in writing, announcing, station management, and program direction the student station affords an opportunity to "learn by doing."

3. The student station permits experimentation in program production.

Since the programs of the student station are confined to the campus there is more latitude possible than would be the case if the broadcasts went beyond the campus buildings.[2] While the student station must hold the

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[1]Bloch, op.cit., p.48

[2]Borst, op.cit., p.1, first page of an unnumbered handbook

interest of its audience with the best programs it knows how to produce, it can afford to try new ideas since it has no sponsors to worry about and its audience is sympathetic to student innovations.

4. A highly intelligent audience offers the opportunity to raise the level of radio progfams.

Commercial radio, thinking mainly in terms of the greatest possible audience, must plan most of its programs for the average level of intelligence. The student broadcasting station, on the other hand, with its highly selective audience, has an opportunity to explore the possibilities of raising the radio listening habits of the group to which it broadcasts.

5. The student broadcasting station helps to develop a greater community of interest on the campus.

The student broadcasting station, on those campuses where it serves all of the resident students, helps to develop a community of interests by keeping all of the colleges informed of the activities of each, by presenting organizations whose memberships are drawn from all of the colleges, and by presenting programs of campus-wide interest such as talks by officers of the administration or broadcasts of athletic events. It further helps to cement the relations among the colleges and departments since it frequently draws its staff from all of them.

Engineers and control men are usually drawn from the engineering school. Members of the business board are likely to come from the College of Commerce. Program directors and production men will probably come from the speech division, the English department or the dramatics division. Writers will usually come from the School of Journalism, or from among the students specializing in English composition. The music director will in all likelihood come from the College of Music, as will the station musicians. Staff members covering the special features such as news, sports,

women's programs might come from any of the colleges, but it would be reasonable to expect them to come from journalism, physical education, and home economics respectively. This does not preclude the fact that any member of the staff, regardless of his function, might come from any one of the colleges. Working in the student broadcasting station might be an avocation entirely removed from his main interest. In either case the staff of the station is a meeting ground for the students from all the colleges and as such it has a tendency to bring the colleges closer together.

6. Quick access to the student body through the student broadcasting station may be valuable in times of emergency.

On those campuses where all of the residence halls are connected with the student broadcasting system, the ability to get in touch with the students quickly and easily may prove of great value in times of emergency. This fact may be of increasing importance at some institutions located in key defense areas.[3]

There may be occasions, too, when the administration or the student government will find the student broadcasting station helpful as a means of reaching many of the students when no other means would be feasible.

7. The student station may be valuable in helping to coordinate campus defense activities.

In addition to its routine function of keeping the students informed of campus activities of all kinds, the student broadcasting system might have an unique value in times of practice blackouts or actual raids. The campus station operating on very low power and with radiations from its equipment not exceeding 262 feet from any building it serves, might be

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[3]Bloch, op. cit., p. 49

permitted to continue to broadcast even in the event of an actual raid. The use of the student broadcasting system at such a time by the campus defense officials might be of inestimable value.

Weaknesses of the Student Broadcasting Stations

There are some weaknesses in the student broadcasting stations under present operating conditions. These weaknesses may be attributable to the very short time the stations have been operating, because they have not gained a complete understanding of their possibilities, or because the administration has not yet seen the full significance of this comparatively new student activity.

1. The student broadcasting stations are not sufficiently integrated into the academic work of the institutions.

The student stations have started, for the most part, because of the interest of a student or a group of students. The emphasis has been on the entertainment phase of radio, and educational programs have received little attention. The administration has been helpful, in many cases lending money so that the stations could be established. Beyond that, and a nominal amount of supervision, the administration has left the station to the students. Both students and administration seem to have failed to recognize the possibilities of the student station being utilized as a teaching tool, definitely integrated into the institution's program.

2. Student broadcasting stations have not taken advantage of their opportunities for experimentation.

Student station staffs have not taken advantage of the unique position in which they find themselves to develop new types of programs. Unhampered by many of the restrictions which the commercial stations have, the student broadcasters have been content, for the most part, to follow

the practices of the commercial stations. Their programs are not greatly different from what the student could get from almost any local station. They have just substituted different personnel, different talent, and different emphasis.

There is probably too much time given to transcribed programs and programs of recorded music. While it is possible for the student station to produce good musical programs by using records, and to present professional talent on transcribed programs, it would be more valuable to fill a greater part of the station time with worth-while programs of campus origin.

3. <u>The student stations may be broadcasting for too long a period each day</u>.

The amount of time and the times at which the student stations may broadcast are specified definitely by the administration at some of the colleges. At other institutions only very general and very liberal rules have been made. The average student station is "on the air" between four and five hours a day, usually in the evening. The schedule usually runs from Monday through Friday. It is obvious that a tremendous amount of work would have to be done to produce live programs to fill from twenty to twenty-five broadcast hours a week. Like many local broadcasting stations, student stations have relied on records and transcriptions to fill a large part of their broadcast time.

It would seem reasonable to question the advisability of the student broadcasting station filling the greater portion of its time with programs of this type. Where the student station duplicates exactly what the commercial stations are doing, that time had better be spent doing something else. If, however, the transcribed programs are of a type made especially for a student audience, as is often the case with transcriptions

received from the Intercollegiate Broadcasting System exchange, there is more justification for using them.

A shorter broadcast period with a higher per cent of the time given over to programs originating on the campus might prove to be a more valuable service on the part of the student broadcasting station.

4. The student broadcasting station is effective only at colleges with residence halls.

It would be difficult, if not impossible, to find a use for a student broadcasting station, as such, at an institution where there are no dormitories or where the residences are scattered among those of the townsfolk. A broadcasting system might be built for its value as a laboratory for use with certain courses, but in this case a public address system would probably serve as well.

The Values of the Intercollegiate Broadcasting System

The Intercollegiate Broadcasting System has been a valuable organization in the development of student broadcasting stations.

1. Student stations receive the benefit of the experiences of the other stations through the Intercollegiate Broadcasting System's exchange.

Student stations profit by the information developed by other stations, as well as by the exchange of transcriptions, manuscripts and production ideas relayed to them through the Intercollegiate Broadcasting System's offices.[4] The Intercollegiate Broadcasting System is in constant touch with all of the member stations, and keeps abreast of the happenings in the radio field in general, to keep the member stations informed. It is a storehouse of pertinent information on student broadcasting which is made

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[4]Bloch, op. cit., p. 49

available to any group interested in radio broadcasting, whether that group is a member of the Intercollegiate Broadcasting System or not.

2. Student stations receive help with technical problems from Intercollegiate Broadcasting System technical manager.

One of the most valuable services which the Intercollegiate Broadcasting System renders to the member stations is help on technical problems.[5] The technical manager of the Intercollegiate Broadcasting System was one of the founders of the Brown Network. He has been in touch with the student broadcasting stations since the beginning and has worked on most of the problems that have presented themselves. In addition to giving aid on specific problems submitted, the technical department has a handbook and special studies of equipment all of which are available for the asking. Complete information including blueprints and description for the setting up of a student broadcasting station can be had through the Intercollegiate Broadcasting System's technical department.

3. Student broadcasting stations secure national advertising accounts through the services of the Intercollegiate Broadcasting System.[6]

It is doubtful if many of the student broadcasting stations would be able to secure national advertising accounts through their own efforts. It is the combination of stations covering fairly wide geographic areas offered by the Intercollegiate Broadcasting System, that makes advertising of this type attractive to the national advertiser.

Situated in New York City, the business office of the Intercollegiate Broadcasting System is in a strategic position to keep in touch with the advertising agencies, and to furnish the advertiser with information re-

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[5] Ibid., p. 48

[6] "Intercollegiate Web Signs Camels," Radio Daily, October 3, 1941, p.1

garding the coverage of the system or the various combinations of stations that can be effected.

This service is particularly valuable as sixteen out of the twenty student stations depend upon advertising for much, if not all, of their operating expenses.

4. Through the Intercollegiate Broadcasting System the student stations cooperate with national organizations and maintain relations with national organizations in the radio field.[7]

Student stations are able to cooperate with many agencies of the national government through the Intercollegiate Broadcasting System. The New York office acts as a clearing house for transcribed programs, announcements and manuscripts that many government agencies are producing in connection with the war effort.

Through the efforts of the Intercollegiate Broadcasting System a dozen student station are now rebroadcasting the programs of the Frequency Modulation Network which operates in the Northeastern states.[8] This makes high fidelity programs available to the campus listeners.

5. Student stations have been brought to the attention of prominent people and have received a good deal of favorable publicity through the efforts of the Intercollegiate Broadcasting System.

Through the efforts of the Pan-American department of the Intercollegiate Broadcasting System, the student stations were brought to the attention of prominent educators, radio executives and government officials.[9]

A good deal of publicity, both national and sectional, resulting from the efforts of the Intercollegiate Broadcasting System, has served to

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[7]Block, op. cit., p. 48

[8]Block, op. cit., p. 49

[9]Pan-American Bulletin of IBS, July 28, 1941, p. 2. No volume or number appear on this bulletin.

stimulate the interest of students in all sections of the country. Such publicity will probably serve to increase the size of the Intercollegiate Broadcasting System with the possibility of increasing its value to the member stations.

Weaknesses of the Intercollegiate Broadcasting System

Perhaps the greatest weakness of the Intercollegiate Broadcasting System is that it has been too ambitious. While it is commendable that it has had a good deal of initiative and is constantly broadening its horizon, perhaps more attention to the development of the potentialities of the individual student station would be of greater value than some of the activities undertaken.

1. The Intercollegiate Broadcasting System has placed too high a value on the all-student aspect of the student broadcasting stations.

The Intercollegiate Broadcasting System seems to have valued too highly the principle that stations should be operated entirely by students. That the idea had its origin with students, that they have given their time and their money in a good many cases, that they have worked hard and long to establish the stations, and that they have done the routine work of operating a broadcasting station with a minimum of faculty supervision, is an accomplishment. But, on the other hand, there are instances in which they have not taken full advantage of all the help that members of the institution's staff have to offer both in the way of technical help and sound advice. In such cases, the efficiency of the station suffers from this lack of knowledge.

2. The Intercollegiate Broadcasting System is too anxious to be spectacular, to make big gains.

In inaugurating a series of broadcasts to South American universities

the Intercollegiate Broadcasting, regardless of the valuable contacts and experience this activity brought, seems to have gone a little far afield. The same amount of time and energy put into plans for increasing the membership of the Intercollegiate Broadcasting System would probably have been more valuable. Since there are 1690 institutions of higher education in the United States with a total enrollment of 1,350,000 students and the Intercollegiate Broadcasting System as constituted at present has only twenty members, it would seem that international development at this time is a little premature.[10]

3. The Intercollegiate Broadcasting System has been too little concerned with educational programs and the educational possibilities of the student station.

One of the purposes of the Intercollegiate Broadcasting system as stated in its constitution is to further educational purposes. Some of the programs produced by the student stations might be considered "educational" just as many of the programs of the commercial stations might be. There has, however, been no particular effort to explore the possibilities of the student station as an educational tool. In a handbook on programs and production recently issued by the Intercollegiate Broadcasting System not a single reference is made to an educational program. The handbook, of course, doesn't purport to be exhaustive, but it does seem significant that education is not even mentioned.

Regardless of what the original plans of the Intercollegiate Broadcasting System included, at present both the individual stations and the national organization seem to consider the chief function of the student

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[10] Statistics of Higher Education, U. S. Office of Education, Bulletin 1940, No. 2, pp. 12, 13

station to be that of entertainment. If that is the only goal of the student broadcasting station, it may be missing a chance to make a significant contribution to education.

Recommendations

In light of the foregoing evaluation certain recommendations can be made.

1. There should be a closer relation between the administration and the student broadcasting station.

This does not necessarily mean greater faculty control, but rather cooperation between the administration and the student station staff so that the student station can realize its greatest possibilities of service to the student body and the institution.

2. The program production staff of the student broadcasting station should develop an experimental attitude to the end that it might produce programs of greater value to its listeners.

The student station has an opportunity to make significant contributions to radio. Its unique position confines it only within the bounds of good taste. As some of the younger writers for radio have exploded many of the notions regarding radio's limitations, so the student broadcasters have the chance to develop new ideas in radio production, if they will use fewer records and transcribed programs and experiment more with their own ideas.

3. The teachers in music, writing and drama courses should consider the student broadcasting station a laboratory in which their students can get valuable experience.

Opportunities for learning by doing have been all too few in our whole educational system. Too often the immediate goals of the work of the students have had to be hypothetical. The student station offers an opportunity to student musicians for actual experience in broadcasting to a real

audience of their fellows. Radio broadcasting offers another type of acting experience to the student interested in drama, and more frequent participation than is possible in plays for the legitimate stage. Radio offers an outlet for the efforts of the students in writing courses and challenges them to do their best work in order that their creations may be heard on the air.

There have been a few instances in which the student station has been used definitely as an educational tool. These may point the direction in which many stations might go. Two years after the Brown Network was founded, the Music Department of Brown University was giving academic credit to students who listened to a program of classical music broadcast by the student station.[11] At Columbia University the students approached their currently popular program, "Music to Study By," with some misgivings not knowing what the attitude of the faculty would be toward such a plan. When the idea was suggested to a professor of educational psychology, he was enthusiastic. He saw in this a chance to find out whether music increased or decreased studying efficiency; and if it was helpful, the kind of music that was best adapted to this use. At the present time CURC at Columbia is used as a laboratory for Erik Barnouw's courses in Script writing and radio production. The Columbia School of Journalism presents a nightly news summary over CURC. The University of Alabama has incorporated its student station into the course in radio production under Dr. John Carlisle.[12]

4. <u>The making of listener surveys, program preference studies, listener habit studies and the collection of other data necessary to the intelligent development of the student station should be included in the stations' operating policy</u>.

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[11] Barnouw, <u>op. cit.</u>, p. 80

[12] <u>Bloch, op. cit.</u>, p. 48

Students know, in a general way, the likes and dislikes of students and their ordinary habits. The life of a college campus is regulated pretty much by the clock. It is fairly easy to tell in what places most students will be at about any given time. But it is not enough that the student broadcasting station know that at certain times most of the students will be in their rooms. The station needs to know whether they listen to the radio at that time. Information on what programs they listen to is important. Knowing the listening habits of the students will help the station to plan its programs.

There is another function which gathering this data might perform. It might be one more point at which students gain practical experience. Statistical studies for the station might be done by students in classes in statistics.

5. The Intercollegiate Broadcasting System should cooperate with the student stations in carrying on research in the field of educational programs.

The Intercollegiate Broadcasting System has been of real service to the student stations making available to them the findings of research in the technical field. It has a good opportunity to be of just as significant service in the field of educational programs. There is a field that needs exploration! Educators would undoubtedly be interested in a cooperative plan among the student stations, the Intercollegiate Broadcasting System, and specialists in radio education, to investigate the possible educational uses that might be made of student broadcasting stations.

6. The Intercollegiate Broadcasting System should bend all of its efforts toward the greater development of student broadcasting stations in the United States.

There is sufficient room for expansion in membership and refinement of program in the United States to get the undivided attention of the

Intercollegiate Broadcasting System. Only the merest fraction of the total number of collegiate institutions are represented in the Intercollegiate Broadcasting System at the present time. The numbers can be swelled, and the whole movement made more significant by the inclusion of more and more colleges and universities. But the mere fact of bigness in itself won't necessarily add any more to the stature of the Intercollegiate Broadcasting System. With the coming of new members must come a broader conception of service that will include among its objectives an effort to explore the possibilities of the Intercollegiate Broadcasting System to further the cause of radio education.

In the relatively short period of their existence the student broadcasting stations have become important factors in campus life. That they hold values for the student body is evidenced by the fact that student organizations and the student newspapers foster them. The administration, too, has shown more than a passing interest in them, by the financial support given to them and by permitting their continuance. Whether these stations will add something significant to student life or whether they simply constitute one more extra-curricular activity to disorganize even further the student's life on the campus cannot be definitely answered at the present time. Much will depend upon the extent to which these enterprises become integrated into the educational program of the institution.

The Intercollegiate Broadcasting System may be serving an important function as a mere coordinator of student broadcasting stations. Yet is has left untouched the field of education by radio, the furtherance of which was one of the purposes of its founding. Experimentation and stimulation along this line might yield significant results and justify much more logically the existence both of the stations and of the national organization.

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